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Application Number: 09/918580

Specification Amendments:

Applicant requests the replacement of the entire paragraph beginning on line 7 of page 5 of the original application, with the following paragraph:

--Ueda, U.S. Patent # 5,784,931 (1998) shows a clipless bicycle pedal designed to engage a recessed cleat, having a spring loaded, rotatable tread cage surrounding the clipless binding. This design is a variation of the previous design of Hanamura, U.S. Patent #5,771,757, in attempting to provide contact between the tread cage and the shoe sole while the cleat is engaged with the binding mechanism. It is described, though not claimed, as providing a shoe resting surface for a cycling shoe when the cleat cannot be engaged, as encountered during many types of off-road bicycle racing. No figure shows a shoe sole being supported by the cage alone. Under any significant foot pressure, the tread cage will rotate relative to the binding with the result being that the cleat engaging members of the binding protrude substantially above the top of the tread cage. Thus the shoe is supported either on top of, or engaged with the binding. If the shoe is placed on the pedal with the ball of the foot over the pedal spindle axis, only a cleat engaged position will be stable, for if the cleat is not properly engaged with the binding, there is only metal to metal contact between the bottom of the cleat and the top of the binding which is very slippery and insecure. If the shoe is placed on the pedal in a substantially different orientation, so as to avoid contact of the cleat with the binding, then the top surface of the binding contacts the sole of the shoe. Thus, the shoe is supported primarily by the top of the binding, instead of the shoe cage. This is again, a slippery and insecure form of support. Furthermore, this foot position does not allow safe, secure comfortable or and efficient pedaling. In order to have contact between the sole of the shoe and the top of the tread cage , the shoe must be at least substantially tilted to one side or the other, which is again is not safe, secure, ~~comfrotable~~ comfortable or efficient for pedalling. As such, the cage is not ~~truly~~ significantly supportive of the rider's foot and cannot provide a stable shoe supporting surface for any type of shoe. As such this pedal cannot be considered a dual mode unbound/clipless pedal; it is a clipless pedal that attempts to provide a temporary surface for the rider to place their foot when terrain and/or speed prevent them from immediately clipping in to the binding. Thus this pedal design is not effective for use in unbound mode, and, like the design of Nagano, U.S. Patent #5,771,757 described above, is

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intended only to aid the rider in achieving cleat engagement under difficult circumstances. As such, it does not anticipate a bicycle pedal according to this invention, as it does not provide sufficient height variability between a binding and a shoe supporting surface to be comfortably and safely usable in either clipless or unbound mode. --

Please replace the paragraph starting at line 2 of page 17 of the original application with the following two paragraphs:

Though the motion of bindings **32** relative to shoe supporting surfaces **15** is arcuate, it is the height of the top surfaces of each binding **32** relative to the height of the corresponding shoe supporting surface **15** which determines whether the pedal can be used in either a clipless binding mode, with a cycling shoe **27** having a sole **28** recessed cleat **31** attaching to a clipless binding **32**, or in an unbound mode where a cycling shoe **27**, or other shoe contacts primarily a shoe supporting surface and is otherwise unattached to the pedal. This relative height can best be ~~generally~~ defined as the difference ~~in~~ of the height above the spindle axis of a ~~plane~~ cylinder having a radius similar to that of the forefoot portion of a typical rigid, curved sole cycling shoe, here taken to be 8 inches, whose axis is parallel to the rotation axis of ~~pedal~~ spindle and surface is tangent to shoe supporting surface **15**, at the point of shoe sole **28** contact, thus locating the cylinder a minimum distance from the spindle axis, and the height above the spindle axis of a ~~plane~~ second cylinder similarly parallel to ~~pedal~~ spindle **12** rotation axis ,whose axis lies in the plane defined by the spindle axis and the first cylinder axis, and whose surface is tangent to the uppermost facing surfaces of a binding **32**. ~~at a similar point of shoe 27 or cleat 31 contact.~~

Dimensions for these heights are shown in fig. 8, which, although showing a variation of the preferred embodiment, also apply, in a like manner, to the preferred embodiment described above, the alternative embodiments described below, as well as any other pedal which is claimed to provide both clipless binding and unbound modes of operation. The height of shoe supporting surface 15 is denoted HS. The two possible heights of the corresponding binding are denoted HB and HB' for bindings in the retracted (for unbound operation) and extended (for clipless binding operation) positions, respectively.

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Applicant requests the replacement of the 3rd paragraph beginning on line 35 of page 17, of the original application, with the following paragraph:

-- In a variation of the the preferred embodiment, shown in fig. 8, shoe supporting surfaces **15** of pedal body **14'** are placed slightly higher (further apart from each other) and links **42'** made slightly longer to allow a corresponding increase in the distance between pins **38F** and **44** and between **38R** and **44** thusly providing further retraction of bindings **32** into pedal body **14'**. This may provide better shoe sole grip for worn down shoe soles, and possibly allow the use of certain non-sole recessed cleat and binding systems by allowing the cleat to protrude into cutout **30**. ~~Fig. 8 also shows a precise method for measuring the heights of both bindings and clipless shoe supporting surfaces. A first gauge comprising a cylinder of radius 8 inches, which corresponds to the forefoot section of a typical cycling shoe of average size, and having its axis held parallel to the spindle axis, is fully impressed against a shoe supporting surface 15to find the line of tangency of minimum distance from the spindle axis, thus simulating a shoe supported by the shoe supporting surface, in proper position for safe comfortable and efficient pedaling. This distance from the spindle axis to this line of tangency is denoted HS. A plane is then constructed through the axis of the cylinder gauge and the spindle axis, denoted in fig 8 by the centerline. The two possible heights of the corresponding binding are defined by the position of a second cylindrical gauge of the same radius as the first, whose axis is contrained to be parallel to the spindle axis and to move only in the previously described plane, the cylinder tangent to the binding on its generally uppermost facing surface or surfaces. These distances are denoted HB and HB' for bindings in the retracted (for unbound operation) and extended (for clipless binding operation) positions respectively. --~~